REMARKS

Reconsideration of this application is requested. Claims 11-18 are in the case.

I. PRIORITY

The Examiner has noted that applicant has not filed a certified copy of the Swedish priority application. Pursuant to the Patent Cooperation Treaty (PCT), the certified copy of the underlying Swedish priority patent was submitted in the International Phase of the PCT International application, and a copy of that certified copy should be in the USPTO file of the present application. For the avoidance of any doubt, in order to perfect the priority claim in this case, a further certified copy of the Swedish priority patent application accompanies the present response. Acknowledgement of receipt of the certified priority document is requested in the next paper to issue in this application.

II. SPECIFICATION

The specification has been objected to as not containing an Abstract. In response, an Abstract is presented on a separate sheet attached to this response. The Abstract is based on the Abstract appearing on the front face of the underlying PCT application WO 00/76759 A1. No new matter is entered.

III. THE 35 U.S.C. § 112, SECOND PARAGRAPH, REJECTION

Claims 1-10 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for the reasons stated on page 2 of the Action. In response, claims 1-10 have been canceled without prejudice, and replaced by new claims 11-20. The alleged irregularities noted by the Examiner have received attention in the preparation of the new claims. In addition, the claims have been amended to remove the European-style "characterized in that" language, and have generally been revised to place them in a form more suited to U.S. practice. No new matter is entered. Withdrawal of the outstanding 35 U.S.C. § 112, second paragraph, rejection is accordingly respectfully requested.

IV. CLAIM OBJECTIONS

Claim 1 has been objected to in view of the informalities set forth on page 2 of the Action. In response, those informalities have received attention in the preparation of the new claims presented with this response. Withdrawal of the claim objections is now respectfully requested.

V. THE OBVIOUSNESS REJECTION

Claims 1-6, 8 and 10 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent 3,526,566 to McIlvain et al. That rejection is respectfully traversed.

The present invention relates to the formation of a crease consisting of a single crease line, by creasing a packaging laminate with a single creasing device. More

specifically, a method is provided of creasing a packaging laminate manufactured from cellulose fibers, which packaging laminate comprises a bulk promoting layer, and on at least one side of the bulk promoting layer at least one side layer, the side layer and bulk promoting layer being directly or indirectly joined to each other over essentially their entire surfaces facing each other. The method comprises forming a crease consisting of a single crease line by pressing the single creasing device down in a first side of the laminate. The bulk promoting layer comprises a network structure of cellulose fibers, and the crease line is formed by the single creasing device being pressed down in the first side of the laminate while, on the other side of the laminate, which is opposite to the first side, a holding-on tool is provided which is essentially planar in an area corresponding to the location of the creasing device. In this way, the single crease line is formed in which the network structure of the bulk promoting layer is weakened and compressed while the laminate is kept essentially planar on the opposite side in the area of the crease line. As a result, the weakening and compression enables the side layer to sink down into the bulk promoting layer in the crease line, when folding the packaging laminate in the crease line, essentially without the formation of bulges or delamination occurring in between the layers, or cracks being formed in connection with the crease line in one or two outermost layers of the laminate.

The problem faced by the inventors was to achieve a well-defined crease in which, when the laminate is folded along the crease line, essentially no bulges are formed, no delamination occurs between the layers, and no cracks are formed in connection with the crease line in one or two outermost layers of the laminate. Thus, the problem focuses on the existence of one or two outermost layers in the laminate,

i.e., at least one side layer on at least one side of the bulk promoting layer.

The present inventors have discovered that this problem may be solved by providing a bulk promoting layer which comprises a network structure of cellulose fibers having the ability to be weakened and compressed when a creasing device is pressed down into the packaging laminate. An essentially planar holding-on tool is then employed on the opposite side of the packaging laminate, in an area corresponding to the location of the creasing device, thereby avoiding the formation of any projection on the opposite side of the packaging laminate.

It is important to note that that the use of a creasing device having an essentially planar holding-on tool on the other side does not solely result in a crease line which is well-defined and by which, upon folding along the crease line, essentially no bulges are formed, no delamination occurs in between the layers, and no cracks are formed in connection with the crease line in one or two outermost layers of the laminate. This is so because, in any conventional paperboard or packaging laminate, the paperboard or bulk promoting layer will not be able to absorb the material which is transferred from its original location when the crease line is formed. This means that, in a subsequent folding in the crease line, bulges, cracks and/or delamination may occur, since there is no room left for the side layers in the folding.

In contrast, in the present invention, the compressible network structure characterizing the bulk promoting layer allows for the "superfluous" material to be absorbed into the network which, in turn, allows the side layer to sink down into the bulk promoting layer upon subsequent folding, essentially without the formation of bulges or delamination occurring in between the layers or cracks being formed in connection with

the crease line in one or two outermost layers of the laminate.

McIlvain does not suggest the present invention. McIlvain describes the use of several spaced apart creasing tools to create a single crease line (see. e.g.. Fig. 5 and 6; col. 3, lines 5 —11 and claim 1). Thus, McIlvain uses several creasing devices, in order to form a single crease line. It is also clear (see col. 4, lines 16 — 34) that the spacing of the spaced apart creasing tools is crucial. This alone would lead one of ordinary skill **away** from the present invention, which requires the use of a **single** creasing device.

McIlvain only describes creasing of a paperboard blank, and does not mention any side layer. One of ordinary skill would know that creasing by a creasing device having a planar holding-on tool, as shown in McIlvain, Fig. 6, would not solve the problem faced by the present inventors in regard to a packaging laminate which has a conventional bulk promoting layer and at least one side layer. If this was attempted, the problem addressed by the present invention would not be solved, since a conventional packaging laminate having a bulk promoting layer and at least one side layer, would not be able to absorb the superfluous material in the crease line. Hence, in subsequent folding in the crease line, bulges would be formed, and cracks and/or delamination would occur. This problem is essentially avoided in the present invention.

McIlvain also indicates that a delamination and formation of bulges is crucial for the invention described therein (see, col. 4, lines 49 - 52 ("encourage delamination"); col. 4, lines 59 - 60 ("at least partly delaminated"); col. 4, line 71 ("will buckle outwardly"); col. 5, lines 14 - 15 ("substantially completely delaminated")). Furthermore, McIlvain discloses that compression of the paperboard is undesired (see, col. 5, lines 22

- 25, which would lead one of ordinary skill **away** from the present invention).

The present invention as now claimed strives to avoid delamination and the formation of bulges. In the present invention, this is achieved by a **single** creasing device in association with a planar holding-on tool for a packaging laminate having a bulk promoting layer and a side layer, in which the bulk promoting layer has a network structure that enables the side layer to sink into it as the bulk promoting layer is weakened and compressed.

McIlvain clearly does not lead one of ordinary skill in this art to the concept of using a creasing device having a planar holding-on tool to solve the problem faced by the present inventors. One of ordinary skill would not have been motivated, based on McIlvain, to select a bulk promoting layer having a network structure of cellulose fibers and having the ability to be weakened and compressed by creasing to enable the side layer to sink down into the bulk promoting layer in the crease line when folding the packaging laminate along the crease line.

The Examiner's position that Figs. 1 and 2 of McIlvain show a holding on tool that is essentially planar in an area corresponding to the location of the creasing device is respectfully traversed. Figs. 1 and 2 of McIlvain show a female die member having a recess which makes it non-planar. A planar holding on tool is shown in Fig. 6 of McIlvain, but this is in cooperation with a double creasing device.

The Examiner's position that Figs. 2, 3, 6 and 7 of McIlvain show a side layer of the laminate is also respectfully traversed. No such side layer is shown in the Figures.

In light of the above, it is clear that one of ordinary skill would not have been motivated to arrive at the presently claimed invention based on the McIlvain disclosure.

Absent any such motivation, a *prima facie* case of obviousness has not been made out in this case. Withdrawal of the outstanding obviousness rejection is accordingly respectfully requested.

VI. AMENDMENTS

New claims 11-20 are resented. New claim 11 recites "...a crease consisting of a single crease line by a single creasing device being pressed down in a first side of the laminate a crease". This is supported by the originally-filed specification, for example at page 9, lines 1-7, page 3, lines 1-5 and Fig. 3. It is clear, from page 3, lines 1-5, that the provision of several parallel crease lines in one and the same crease is undesired. Consequently, the invention, as now defined in claim 11 relates to a crease consisting of a single crease line. New claim 11 also recites features from previous claims 2 and 3 and page 5, lines 13-24, and includes the functional feature; "so that said weakening and compression enables..." The subject matter of previous claims 2 and 3 has been cancelled without prejudice. Previous claim 7, directed to a packaging laminate, has been rewritten as new claim 17 which is in independent form. New claim 17 defines the packaging laminate by its own features, and includes a functional feature; "so that said weakening and compression enables...". Previous claim 9, directed to a packaging, has been rewritten as new claim 19 and is dependent on new claim 17. No new matter is entered.

Allowance of the application is awaited.

Respectfully submitted,

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